Computer Science (New Book) Class 10th (Programs)

Important C++ Programs (Loop)

1-Write a program using FOR loop to print counting from 1-10.

Program:
```
#include<stdio.h>
void main(){
   for(int i = 1; i <= 10; i++)
   {
      printf("%d ", i);
   }
}
```
Output: 1 2 3 4 5 6 7 8 9 10

2- Write a program using FOR loop to print even numbers from 2 to 20.

Program:
```
#include<stdio.h>
void main(){
   for(int i=2; i <= 20; i=i+2)
   {
         printf("%d ", i);
   }
}
```
Output: 2 4 6 8 10 12 14 16 18 20

3- Write a program using FOR loop to print odd numbers from 1 to 19.

Program:
```
#include<stdio.h>
void main(){
   for(int i=1; i <= 19; i=i+2)
   {
         printf("%d ", i);
   }
}
```
Output: 1 3 5 7 9 11 13 15 17 19

4- Write a program using FOR loop to print "PUNJAB" 10 times.

Program:
```
#include<stdio.h>
void main(){
   for(int i = 1; i <= 10; i++)
   {
      printf("PUNJAB\n");
   }
}
```
Output:
```
PUNJAB
PUNJAB
PUNJAB
PUNJAB
PUNJAB
PUNJAB
PUNJAB
PUNJAB
PUNJAB
PUNJAB
```

5- Write a program using FOR loop to print table of any number.

Program:
```
#include<stdio.h>
```

```
void main()
{
   int n;
   printf("Please enter a number: ");
   scanf("%d", &n);
   for(int i=1; i<=10; i++)
   {
      printf("%d x %d = %d \n", n, i, n*i);
   }
}
```

Output:

```
Please enter a number: 3
3 x 1 = 3
3 x 2 = 6
3 x 3 = 9
3 x 4 = 12
3 x 5 = 15
3 x 6 = 18
3 x 7 = 21
3 x 8 = 24
3 x 9 = 27
3 x 10 = 30
```

6- Write a program using FOR loop to print factorial of any number.

Program:

```
#include<stdio.h>
void main()
{
   int n, fact = 1;
   printf("Please enter a positive number whose factorial you want to find: ") ;
   scanf("%d", &n);
   for(int i=1; i<= n; i++)
   {
      fact = fact * i;
   }
   printf("The factorial of input number %d is %d", n, fact);
}
```

Output:

```
Please enter a positive number whose factorial you want to find: 5
The factorial of input number 5 is 120
```

7- Write a program using FOR loop to print sum of first 10 natural numbers.

Program:

```
#include<stdio.h>
void main(){
   int sum = 0;
   for(int i = 1; i <= 10; i++)
   {
      sum = sum+i;
   }
   printf("Sum of first ten natural numbers is %d", sum);
}
```

Output:

```
Sum of first ten natural numbers is 55
```

8- Write a program using FOR loop to print product of first 10 natural numbers.

Program:

```
#include<stdio.h>
void main(){
   int product = 1;
```

```
    for(int i = 1; i <= 10; i++)
    {
       product = product*i;
    }
    printf("Product of first ten natural numbers is %d", product);
}
```

Output: Product of first ten natural numbers is 3628800

9- Write a program using FOR loop, which will print numbers in following series 50, 45, 40 .... 10.

Program:

```
#include<stdio.h>
void main(){
    for(int i=50; i >= 10; i=i-5)
    {
       printf("%d\t", i);
    }
}
```

Output: 50 45 40 35 30 25 20 15 10

10- Write a program using FOR loop to print Alphabets from A to Z.

Program:

```
#include<stdio.h>
void main(){
    for(char c = 'A'; c <= 'Z'; c++)
    {
       printf("%c ", c);
    }
}
```

Output: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

11- Write a program using FOR loop to print alphabets from a to z.

Program:

```
#include<stdio.h>
void main(){
    for(char c = 'a'; c <= 'z'; c++)
    {
       printf("%c ", c);
    }
}
```

Output: a b c d e f g h i j k l m n o p q r s t u v w x y z

Best of Luck (Board Exams 2023)